Clinical Operations: Vocabulary Task Force
Draft Transcript
April 19, 2010

Presentation

Judy Sparrow – Office of the National Coordinator – Executive Director
Good morning, everybody, and welcome to the taskforce on vocabulary meeting. This is a public meeting, so there will be opportunity at the end of the call for the public to make comments. Let me do a quick roll call. Jamie Ferguson?

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Present.

Judy Sparrow – Office of the National Coordinator – Executive Director
Betsy Humphreys?

Betsy Humphreys – National Library of Medicine – Deputy Director
Present.

Judy Sparrow – Office of the National Coordinator – Executive Director
Clem McDonald? Stuart Nelson? Marjorie Rolland? Stan Huff?

Stan Huff – Intermountain Healthcare – Chief Medical Informatics Officer
Present.

Judy Sparrow – Office of the National Coordinator – Executive Director
Chris Chute?

Christopher Chute – Mayo Clinic – VC Data Gov. & Health IT Standards
Present.

Judy Sparrow – Office of the National Coordinator – Executive Director
Marc Overhage?

Marc Overhage – Regenstrief – Director
Present.

Judy Sparrow – Office of the National Coordinator – Executive Director
Daniel Vreeman?

Daniel Vreeman – Regenstrief Institute – Research Scientist
Present.

Judy Sparrow – Office of the National Coordinator – Executive Director
John Klemek? Floyd Eisenberg? Eric Strom?

Eric Strom – DoD Military Health System – Program Management Support

Present.

Judy Sparrow – Office of the National Coordinator – Executive Director
Karen Trudel? Don Bechtel?

Don Bechtel – Siemens Medical – IT Architect, Standards & Regulatory Mgr.
Present.

Judy Sparrow – Office of the National Coordinator – Executive Director
Patricia Greim?

Patricia Greim – VA – Health System Specialist: Terminology
Present.

Judy Sparrow – Office of the National Coordinator – Executive Director
Jim Walker?

Jim Walker – Geisinger Health Systems – Chief Health Information Officer
Present.

Judy Sparrow – Office of the National Coordinator – Executive Director
Greg Downing? Doug Fridsma? Chris Brancato?

Chris Brancato – Deloitte – Manager, Health Information Technology
Good morning.

Judy Sparrow – Office of the National Coordinator – Executive Director
Andy Wiesenthal? Bob Dolan? Lisa Carnahan?

Lisa Carnahan – National Institute of Standards Technology – Chair
Present.

Judy Sparrow – Office of the National Coordinator – Executive Director
Ken Gebhart? Lynn Gilbertson? Nancy Orvis? And Marjorie Greenberg?

Marjorie Greenberg – NCHS – Chief, C&PHDS
Yes.

Judy Sparrow – Office of the National Coordinator – Executive Director
Great. All right. Jamie and Betsy, I'll turn it over to you.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Good morning, everybody. This is Jamie Ferguson, and for our call today, we have three items on the agenda. First is we wanted to have an initial discussion on how we think it might be appropriate to test for EHR adherence to vocabulary standards. And so I think we'll look to Lisa Carnahan to pose the question on that, and we'll have a discussion on that topic.

Second is led by Betsy Humphreys. We'll have an initial discussion on device terminology. We'll get an update on some current activities, and this is just more for, I think, informational purposes for a future agenda item.

And then I think the main body of this call will be discussing some draft recommendations that went out just a couple days ago that would be our recommendations, when finalized, will be our recommendations to the health IT standards committee resulting from the two carrying … and so is there anything else that we want to have on the agenda for this particular call?

Okay. Well then, I think, Lisa, maybe the best thing is for me to put you on the spot and ask what it is that NIST is thinking in regards to testing of vocabulary standards.

Lisa Carnahan – National Institute of Standards Technology – Chair
Okay. Sure. I'm hoping that we're focusing more on the future here and not 2011. For 2011, it kind of is what it is. There's vocabularies attached to the criteria that fall into mostly on or tied to specific standards for interoperability, so either the summary record or the HL-7 messages or NCPDP or some of the others. And our approach there is either through tooling or visual inspection when the data comes up is to make sure that the data exists. Most of the testing for 2011, we're doing it through pushing test data into the EHR.

Most of the criteria are around the ability to record, retrieve, visualize, or send, and so we're pushing those specific vocabulary codes through the test data so that they get into the EHR, and then they're processed, either record, retrieve, visualize, or send. And then on the output side, we're looking to see that those are in fact the right codes. So that's 2011. It's pretty straightforward given the state of the criteria.

Moving forward though, and looking into some of the conversations you've all had about value sets and those types of things, that's much more attractive at this point for us, and NIST has had discussions with many of you over time, and I know Betsy and I have had discussions about this that it would be really, really great for any kind of conformance tooling, and especially as it applies to meaningful use and regulatory purposes is to be able to incorporate from a source of truth, value sets or limited vocabularies or value sets, and be able to work with whoever the authority is on this source of truth to be able to, in an either real time or reasonable time, be able to insure that the tooling is consistent with the value sets. And there's reasonable test data and all those good things.

I guess I could stop there. So I guess we could either discuss further 2011 or discuss moving forward, whichever one you want. I guess, moving forward, I'll be looking for your requirements as well.

Marc Overhage – Regenstrief – Director
This is Marc, if I can jump in a little bit, and I'm not sure which bucket this falls into, but the value sets to me, you know, are really an issue of, it's an OBR OBX payer, right? It's sort of saying the OBR is family history, and the OBX observation is stroke. Then the question is, what code sets do you use to represent those, or am I thinking about that differently?

Stan Huff – Intermountain Healthcare – Chief Medical Informatics Officer
This is Stan Huff. That's not quite right. I mean, the OBR is saying the name of a collection, so it would say like family history or something like that. Then the OBX has two codes in it. One is an observation code like LOINC or like the observables within SNOMED, and then you have the actual value. So in the OBX itself, for instance, you would have something that said family history, and then stroke would be the value in both of those codes. One would be the observation code in the OBX, and the other would be the value.

Marc Overhage – Regenstrief – Director

Absolutely. I was oversimplifying.

Stan Huff – Intermountain Healthcare – Chief Medical Informatics Officer
Okay.

Marc Overhage – Regenstrief – Director
I guess my point was that a value set, which as I understand it, and I don't think Floyd is on to make sure I'm on the right path here, really the major issue that it addresses to me is focusing on where in the record this observation is recorded from because it has different implications.

Stan Huff – Intermountain Healthcare – Chief Medical Informatics Officer
Yes.

Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant
Marc, this is Floyd. I am on. I just hadn't announced myself yet.

Marc Overhage – Regenstrief – Director
Super.

Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant
Actually, the value set we're looking at is actually the list of codes, not necessarily where it's located. The location would apply to a QDS data type, and that would have a location, but the value set should be reflected by the location you'd expect it. That is not necessarily including the location.

Marc Overhage – Regenstrief – Director
But, I mean, that's an integral part of what the value set has to address is where in the record or what sort of context the data was recorded from. And then, as you point out, potentially there's a list of, okay, these ICD-9 codes or these CPT-4 codes or these LOINC codes are the answers that are relevant for a particular thing, and I think we've mixed those sometimes in our discussions.

Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant
Okay.

Lisa Carnahan – National Institute of Standards Technology – Chair
Marc, I haven't been on a lot of these calls. Is that something, the where in the record is that intended to be part of the value set across the board?

Marc Overhage – Regenstrief – Director
I'll let Floyd answer that because I think that's true, but….

Lisa Carnahan – National Institute of Standards Technology – Chair
Okay.

Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant
Well, actually, the where in the record is the value set may inform that. For instance, if it's a SNOMED value set or an ICD-9 … condition list, diagnosis list, or problem list. But the value set itself doesn't actually say the location. In a measure, we need to look for it in a specific location. But the value set itself doesn't do that. It's the value combined with the location, which we call a QDS data element, so those combined we do need to look for.

Christopher Chute – Mayo Clinic – VC Data Gov. & Health IT Standards
Well, this is Chris. Isn't the whole premise of a value set is that it could be reused ideally in multiple locations and for multiple purposes, assuming the domains are overlapping?

Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant
Right.

M
Well, within different measures, right? But, I mean, if you are looking at data from different parts of the record, you might well expect the coding to be different. For example, the granularity that shall record an operative procedure in an operative history, the level of granularity will record it in a past medical history are completely different.

M
Yes, I accept that, but those would be different value sets.

M
Okay.

M
I think there are a couple of things…. I'm not positive they're different, but if you're trying to provide conformance to a message, then I think we're exactly in the situation Marc is describing. You need to know which field and the clinical context in which those coded values can be used. And they might be usable in another place, but if you're trying to make that level of specification, you have to know exactly which field, or if it's an OBX segment, essentially you need to know the association between the observation ID and the value set, and then it's a little different if you're stating, you know, if you're stating the rules or the logic. You have to state again kind of the intent, whether this is a final diagnosis, or whether this is a family history item, or what it is. But that, I'd probably need help from Floyd to know exactly how that part of it should be done.

I see, I guess, in my mind the value set itself, and then some kind of an associative table where you could say, you know, this value set is used in this particular field in this message, or this value set is used in this quality measure with this context. And I don't know if we have on this call, if we're going to talk about exactly how to do that. But that's kind of how I frame it in my mind in terms of what we need to capture in order to support those two use cases, you know, the use in messages, if you will, or in data representation and the use as part of the description of a quality measure.

Lisa Carnahan – National Institute of Standards Technology – Chair
Okay. But overriding all of that then is you're also looking at the appropriate use, not just that there's a code that can be looked up, and it's a good code. It's that it's the appropriate code.

M
Absolutely. That is true.

Betsy Humphreys – National Library of Medicine – Deputy Director
This is Betsy Humphreys. I would think that if we're looking at how you would assess the implementation of access and use of standard vocabulary or code sets within EHRs that you would have a variety of requirements that related to specific value sets as Stan, Marc, and Floyd have been discussing. But I believe you would also have to have some other measurements to basically see, assess whether they're handling the use of this vocabulary in a rational way more generally.

For example, does anyone know what version is in place within the vocabulary at any given time if I'm creating new content inside that product? Is there a way of storing what version was used in the records that are generated or in some way, so we even know what version was in use at what time?

And also, things like whether the product is set up to provide access as appropriate to the entire controlled vocabulary when it might be needed. I can imagine locally on your machine, depending on how some of these products are on your local server, actually doing something different with a subset of the vocabulary, than you do with the entire vocabulary for speed, ease of use, or whatever. But you don't want these products, over time anyway.

You certainly don't want the products set up so they actually encourage people to create local variants or local terms when in fact the larger standard vocabulary has the concept and the term that they're interested in, but it's just not been implemented locally in a particular way. I feel I'm in entire agreement that we really need to make sure that we're dealing with the value sets properly, but I think we might have some more general requirements here as well.

M
As I'm listening to the conversation, one of the things that strikes me is there's a couple, I mean, we're lumping this in some ways saying, okay, what are the vocabulary testing or certification approach for EMRs. But, of course, there are different abstracts that we're interested in. In other words, we're interested, I think, well, one example of that would be if I shoved some data into an EMR using a particular appropriate set of codes, you would think you should be – the EMR should be able to emit that data with the same set of codes. I mean, that would be one use case, if you will.

A second use case might be logic executing on that data and is the logic execute on the … get some of the things. In some ways, it seems like from a developer's perspective. We want to allow them to treat whatever they do internally, all the things that Betsy was talking about, as a black box. But what we need to do is specify the external behavior. In other words, you shouldn't, as you said, Betsy, have something that comes in as a very specific code and comes out as a very generic local code, for example. You wouldn't think. I mean, that might be the kind of thing that we'd want to specify.

W
Are these then – because these are – I'm fascinated here learning all this stuff, but these are – and I agree with Marc. We're talking about the title was testing requirements. But these requirements have to kind of land somewhere and not be introduced in the testing process. So I'm hoping these are all ideas that you all have been deliberating on in the value set discussion and the vocabulary recommendations.

M
No.

W
Okay.

M
I don't think it's gotten that detailed yet, and I've not been in all the discussions, obviously, but frankly I don't think we're anywhere near that detailed in our discussions yet.

W
No, that's helpful.

Betsy Humphreys – National Library of Medicine – Deputy Director
My sense is that what we're talking about here is we have an interim final rule for product certification criteria, right? And my view is that, not tomorrow afternoon, but over time, there really are additional certification criteria if we're going to be sure that, in the future, at least we increase the chances that data that's captured using these EHRs is going to really be interoperable when it's transmitted to somebody else.

Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant
Betsy, this is Floyd. I think that's exactly what we're talking about, and that's why splitting the difference between it's the QDS data type and the value set, and by putting together, as an element, is really what Stan and Marc have been talking about. And so it does require some additional certification elements that the data are where they need to be and in the right form. Agreed.

Clem McDonald – Regenstrief – Director & Research Scientist
This is Clem. I just wanted to comment on the discussion about, I think, Floyd, everybody sees different parts of the elephant. I think the key thing I heard out of the discussion is that you can't have a value set without a context … something binds it. Now you might reuse it after that, but if you don't start out with some definitional binding, it just becomes all wooly and runs off the table, and I think that's the key thing. In some cases, it's going to be your measure that binds it. In other cases, it'll be a question or a variable or an observation that'll bind it, so it's just that it can't be free ranging to start, or no one can ever settle whether they should be in it. Does that sound wrong?

Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant
No, I agree with that. I think I was trying to say the same thing in different ways.

M
Well, just to play devil's advocate, I think there is a class of value sets that are, for lack of a better word, almost generic. I'm thinking of administrative genders. I'm thinking of race codes and so on.

Clem McDonald – Regenstrief – Director & Research Scientist
Well, I wouldn't. Why do you think there's an error? You just define them as administrative race codes, which is that field that gets that content.

M
I understand, but you can reuse it in a number of places.

Clem McDonald – Regenstrief – Director & Research Scientist
I'm for reusing. I'm just saying you've got to start with some purpose.

M
Well, but the one that I was going to say is controversial is what do you do with things like problem list diagnoses?

Clem McDonald – Regenstrief – Director & Research Scientist
Well, the really big ones may not be so bound. You know, you've got to take it from this vocabulary.

M
Exactly.

Clem McDonald – Regenstrief – Director & Research Scientist
But the littler ones, you know, the more reasonably numerable, you could see in a menu more often. Those, I think, are what many of us are talking about today. And the really big ones, we'll leave them as a separate category.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Right, and this is Jamie. I think most of the reason why this general topic at this level of detail hasn't come up yet in our discussions is that we've always been talking about value sets in a particular context already, primarily the quality reporting. So we've already been talking about it limited to a calculation of a numerator and denominator of a particular measure.

M
But that's a problem if you're going to expect, I mean, if you don't look at both sides because if you're only thinking of it that way, then you never get it sorted through what you want users to do unless you want them to do double work, you know, do a whole other set of things. I think it's good they both be considered simultaneously.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Lisa, are you getting what you need from this discussion?

Lisa Carnahan – National Institute of Standards Technology – Chair
I'm getting more than what I need from this discussion. I guess the other question I have is, again, and I don't know if you're all familiar. We've been pushing out some of the test method for 2011 to get comments back, and I'm hoping that our analysis was, given the criteria that's stated right now, you know, as I said, it is what it is. There are vocabularies in there, and they attach to certain data elements, and we're pushing, doing some testing through the test data that we're pushing.

I don't know that we can do a whole lot more, given the language and the criteria, unless we see updated language. And I'm hoping. Betsy and I had a discussion about this a couple of months ago because she has great ideas. The one about the EHR, how they're handling updates and vocabularies and things like that. But given that that didn't show up in the criteria, it's not on the table.

Betsy Humphreys – National Library of Medicine – Deputy Director
This is kind of something that I feel the vocabulary taskforce should be looking at in terms of providing some practical, not impossible to implement things going forward. But we all know that there are products out there today that say they have implemented a particular vocabulary, and they implemented a version of it eight years ago. And they haven't actually updated it, you know?

Lisa Carnahan – National Institute of Standards Technology – Chair
Yes.

Betsy Humphreys – National Library of Medicine – Deputy Director
So I think that it doesn't seem – going forward, it seems to me, if we are going to encourage the ability to interpret data coming from other places or require it, and we're going to encourage the ability to output data that is going to be truly interoperable, then I think it seems to me, at any rate, that a piece of certification of these products will have to be some indication that they have a practical mechanism for updating the vocabulary, or at least providing access through their product to an updated vocabulary. I mean, they may not have to incorporate it.

Marc Overhage – Regenstrief – Director

This is Marc. That gets very complicated, though, when you look longitudinally because I received your results in January of 1971 with a particular version of the vocabulary.

Betsy Humphreys – National Library of Medicine – Deputy Director
I know. Therefore….

Marc Overhage – Regenstrief – Director
Yes.

Betsy Humphreys – National Library of Medicine – Deputy Director
Therefore, it seems to me that we have a number of requirements. We have a requirement that people actually are in a mode where there's a lookup, so they can find out what the code meant in 1971, and we have a requirement. However, it seems to me, going forward, we have a requirement that people are not continuing to use local terminology in data exchange for something, which actually was incorporated into a standard vocabulary seven years ago.

Marc Overhage – Regenstrief – Director
Yes. I think that also highlights … is that … be here forever … may not be reused and meet all those good principles that we have for managing terminologies have to be enforced as well.

Betsy Humphreys – National Library of Medicine – Deputy Director
Well, I agree. I just feel that in terms of coming up with a strategy for going forward for this issue of testing to see whether a product actually has implemented a controlled vocabulary that we can't go from where we are today to nirvana in one easy step. But it does seem to me that we should be thinking about how to lay out criteria the same way we're talking about upping the ante on meaningful use over time. It seems to me that we should be also laying out some sort of strategy for upping the ante on what it really means when you say yes, my product fully implements LOINC or whatever.

M
You know, an easy way to do it, but may not fit, is you've got two sides. One is to say if you're supposed to be implementing X, whatever the vocabulary is in some subspace, send them a message that contains those codes, and see if, firstly, it rejects them and, secondly, if they show up. Then the other side is for, like, the testing of Floyd's kind of issue is they should generate a report with the details ahead, with the codes used to make it up. I mean, it wouldn't have to get as much into figuring out a particular piece of software.

Betsy Humphreys – National Library of Medicine – Deputy Director
No, I….

M
Or we can maybe insist though that the codes be used to represent the data inside of the system.

M
I think, if….

Betsy Humphreys – National Library of Medicine – Deputy Director
No, I would not. I don't know what Clem thinks about this, but I'm not saying that.

Clem McDonald – Regenstrief – Director & Research Scientist

No, I wasn't saying that. You send a code, and you can see the content inside. That's the one way coming from the opposite. And the other way, I would guess, for computing, I'm almost guessing if you're going to compute Floyd's stuff, you've got to show the codes that they require to compute it, but I don't know that. I mean, it's a matter of what the policies are in how those ratios are computed. Someone else should tell me that.

M
Well, in order to calculate correctly, you would want to see that the data are in the right place, yes.

Clem McDonald – Regenstrief – Director & Research Scientist
That might be a special case because, well, it might be a special case.

M
You've got be really careful about … place because that implies certain kinds of data structures.

Clem McDonald – Regenstrief – Director & Research Scientist
Yes.

M
Yes.

M
There are lots of different data structures.

M
Yes, and actually that's why the original thought of this was the output of the EHR is in a message or some document structure that is consistent with where it should have come from, so you don't have to worry about the local data architecture.

M
That's partly where I was headed, as Stan was starting to say, okay, that has implications for how the message is coded.

M
Exactly. Right. Right. That's why I was agreeing with your comments early on.

M
Getting back to the theme, Marc, you're saying that they shouldn't have to carry it inside. But if they really implement a code system, let's see, I guess you could go both ways, in and out. In other words, you could translate both ways. Then you could always represent in a message either coming in or coming out. There is a code system of record or the necessary code system.

M
Right.

M
But it's harder to do two-way mapping.

M

Yes. No, no question it'd be harder to do, and I'd obviously advocate implementing inside. I just don't know if we should try to force people to do that if there's a rationale for forcing that.

M
Well, I don't think there's a rationale for forcing the inside to look a certain way. But to translate in and out, well, translate. The question is, if you can translate both directions, you know you've got a good system. If you can't, if you only translate one way, you might still have a good system, so I don't know what to do with that case.

Doug Fridsma – Arizona State – Assoc. Prof. Dept. Biomedical Informatics
This is Doug Fridsma. I was on a line that I couldn't talk, and I'm screaming in here trying to get in.

M
I was doing that too, Doug.

Doug Fridsma – Arizona State – Assoc. Prof. Dept. Biomedical Informatics
I know, so I called back in, so that I could speak. I've got a bunch of comments, but they're probably all past at this point. One of the questions that I have is that, to answer Lisa's questions around 2011, we need to think very carefully around. There's kind of a talk about vocabulary versus vocabulary value sets. And realize that we can only test with NIST those things that have been adopted through regulation.

We need to think very carefully about how we want to do that because, if there's a vocabulary or value set that we anticipate will change more than every two years, we need to provide some sort of recommendation about how we might do that, and we have mechanisms that we can hold people to the feet to the fire with regard to certification if it's adopted in regulation. We can also adopt, or we can have recommendations or guidance statements that are easier for us to update as well. So I think the thing that, to me, is important is that we need to think about 2011 and how we can recommend certification to occur there, and then look forward to 2013 and 2015, recognizing that there are some constraints on what we can do with regard to certification and testing based on sort of the regulatory framework in which we have to operate.

M
Doug, could you clarify for us before I read that … the value sets are not in the current certification and standards final rule, right?

Doug Fridsma – Arizona State – Assoc. Prof. Dept. Biomedical Informatics
Right. I'll make it concrete. If somebody had a problem list, and we said that problem list needs to be described in SNOMED codes, but we would recommend sort of the constrained list of, you know, top 2,000 SNOMED diagnoses or whatever, somebody could get certified if they had any SNOMED code in that problem list, even if it was above and beyond or different than or a subset of that recommended value set, unless that value set was specifically incorporated by reference within the regulation.

M
Which, at this point … might be for 2013.

Doug Fridsma – Arizona State – Assoc. Prof. Dept. Biomedical Informatics
Right now, what we did in 2011, at least the way the IFR is written, it describes the adoption of a particular vocabulary without designating a value set.

M

Yes.

Betsy Humphreys – National Library of Medicine – Deputy Director
Well, which strikes me as a feature, not a bug, myself.

Doug Fridsma – Arizona State – Assoc. Prof. Dept. Biomedical Informatics
Exactly. If RxNorm codes are updated on a daily basis, we have to be very careful about locking in a particular vocabulary or value set based on the regulatory process. Now I think there is some value, and you guys are beginning to sort of talk about that now, about maybe what we need is not to sit necessarily locked in a particular vocabulary, but also provide certification criteria that recommends best practice for managing value sets, you know, with frequent updates or with whatever it is, something that's process related. That may be a way that we can get the kind of good vocabulary and interoperability that we want without locking it into a regulatory framework that is difficult for change.

Andy Wiesenthal – Kaiser Permanente – Exec. Dir. CIS
This is Andy Wiesenthal. I've had the same screaming problem as several others. I'm going to focus on my particular niche of the world, which is end users, and I think we have to be careful here that whatever we do makes it clear, and I know, Marc, you're very sensitive to this, as are others, that if a doctor or a hospital or somebody is going to license the system, that it will work, that it will do the things as advertised and do the things that are required. And so, I mean, all the points that people have made are extremely important, but at the end of the day, if we set up something that means that they can't depend on a stable system for at least a year, that doesn't change, or if it's changing. It's under the covers in a way that doesn't perturb their work, that's a serious problem. And until we can make some important steps in that direction, people are going to be very hesitant about making large investments if they haven't already done so, and the ones that have already done so are going to be fretting, as we are, about whether or not some big chunk of that investment is going to be rendered useless.

Lisa Carnahan – National Institute of Standards Technology – Chair
Doug, this is Lisa Carnahan. I found what you said attractive if it implied that – I realize, like everybody else, the IFR is the IRF, and the criterion standards that are in there, they are what they are. But it sounded like you were willing to kind of have more discussion on issuing the notion of best practices, guides, and things like that that may be, and NIST has seen this in the past, that maybe get some legs in the market itself and become market required rather than regulatory required.

Doug Fridsma – Arizona State – Assoc. Prof. Dept. Biomedical Informatics
Yes. I think we need to be, you know, obviously we want to get to the point where we have interoperability, and we can exchange data according to the vision that Dr. Blumenthal has articulated. The question is how best to do that. We have lots of different levers that we can use to help us achieve that. And so one of them, obviously, is the adoption of standards through the regulatory process. Guidance and other kinds of statements don't carry the force of law, and people can ignore them if they wish. But they ignore them, I guess, at their peril because many times and this is certainly true in other agencies, that guidance statements eventually become part of regulatory framework, and also guidance statements as well can provide kind of value added services, if you will, around certification that says we don't just meet the minimum criteria, but we actually go beyond, and we satisfy some of the guidance statements as well. And people may find that an attractive thing to have in the marketplace with regard to their products.

Lisa Carnahan – National Institute of Standards Technology – Chair
Right. That's what I meant by market, whatever I said, market required, yes.

Doug Fridsma – Arizona State – Assoc. Prof. Dept. Biomedical Informatics
So I want to make sure that, as the committee begins to think this through, we need to think about the worse thing we could do would be to adopt a set of certification criteria around value sets that either is impossible for people to implement or that it hasn't been implemented before, except in very constrained circumstances such that when we get it out there in the marketplace, we realize that it doesn't quite meet our needs because now we're kind of locked into something that hasn't been tested, but it's part of law.

So we have to think very carefully about how we're going to do that, and when it comes to interoperability, it's the value set is where the rubber hits the road, and we've got issues of context. We've got issues of sort of the semantics within that context. And so we need to think very thoughtfully about not only what we need for 2011, 2013, and 2013, as we sort of go through stage one, two, and three. But we need to think about what do we want to have at the end, and how are we going to get there, given the kinds of levers that we have to move.

Marc Overhage – Regenstrief – Director
Doug, this is Marc Overhage. Could you clarify? You said a couple of things that really caught my attention when you were talking about the IFR. And I think you implied that if somebody, for example, adopted any of SNOMED, just as an example, that that would satisfy the IFR.

Doug Fridsma – Arizona State – Assoc. Prof. Dept. Biomedical Informatics
As they way, as the IFR is written, and I'd have to go back and see exactly, is that they are, so if somebody adopted SNOMED, and they were able to produce a document that included SNOMED codes, and those codes were part of the SNOMED, you know, sort of the most recent released, if you will, or the – I don't remember exactly whether it set the floor at the time that the IFR is written, and people can go above that, but they can't go below the one that's adopted, that that would be satisfactory to meeting the certification criteria.

Marc Overhage – Regenstrief – Director
I think, as we think about the ways to test EHRs, that's a very important constraints for 2011.

Doug Fridsma – Arizona State – Assoc. Prof. Dept. Biomedical Informatics
And realize too, if you take a look at the meaningful use criteria, we have a lot of criteria about the functionality of an EHR to be able to either reduce or receive one of these coded documents, but with regard to meeting meaningful use, exchange is sort of less important, particularly around some of the clinical stuff. So you need to be able to produce something so that you can get an electronic copy to the patient of the patient visit or the patient care summary. But there isn't a requirement that that has to be transmitted, for example, to a PHR. You have to just be able to produce that document electronically.

Lisa Carnahan – National Institute of Standards Technology – Chair
Correct. Just to make sure I'm on the same page with you, otherwise we've got big problems. The use of the vocabularies in the IFR are primarily tied to either exchange, well, I think it is tied to all of exchange.

Doug Fridsma – Arizona State – Assoc. Prof. Dept. Biomedical Informatics
I'm thinking about attestation and those sorts of things, but we are putting in the functionality that will allow for exchange to occur.

M
Could I just clarify so that the thing for the patient has to be sent electronically, but there's no hint of a need to use standard vocabulary that they could then make it more useful to themselves like store it in

their PHR?

Doug Fridsma – Arizona State – Assoc. Prof. Dept. Biomedical Informatics
Well, if you take a look at the descriptions around CCD and CCR, it describes the problem list and the drugs have to be provided in a standardized or need to be in a standardized vocabulary. But actually being able to produce that, part of it, and I'd have to go back to the CMS NPRM to be absolutely certain about this, but it gives the provider options, you know, so it make go to a PHR. It could go to a USB drive. It could go to a CD or DVD. In some circumstances, you could be able to print it in sort of a standarized way as well.

M
So a PDF would work, would satisfy?

Doug Fridsma – Arizona State – Assoc. Prof. Dept. Biomedical Informatics
For the 2011. Now the EHR needs to be able to produce it in a standardized way. But there's a lot of options in terms of how that can eventually get conveyed to the patients.

M
Okay.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Well, what I'd like to do is I'd like to try to bring a close to this part of the discussion and move on. Does anybody want to offer some closing comments on this?

Lisa Carnahan – National Institute of Standards Technology – Chair
Jamie, this is Lisa. Actually, this has been most helpful and educational to me, and I think what NIST could bring to the table going forward in these deliberations is kind of keep poking from a testing point of view and, as we like to do, in terms of trying to get as specific as possible where we can, and then note where we can't, and that that may be okay. But I think as we go forward, we can certainly play that role in these discussions.

M
I think one thing that would be helpful is for stage one, I think we need to think very practically about how we can best support the things that are in the IFR, as it stands now, and then also provide recommendations, because this is the time to begin thinking about that for 2013 and 2015. To get back to the comment that Chris Chute made, there may be portions of the kinds of vocabularies and terminologies that we want to use that are relatively stable, and we can pretty much say what the value set should be. And there may be others in which we don't really want to lock that down, and that we may want to focus on kind of good practice with regard to managing the semantics and the vocabularies so that when the certification process hits, we have the ability to sort of incorporate that as part of the criteria. The reality is that the temporary certification program needs to go live this summer.

Lisa Carnahan – National Institute of Standards Technology – Chair
Yes. Thank you.

M
So this is a tremendously valuable discussion, but you know we have to be able to begin really defining what we'd like to have within this criteria. And once the IFR is finalized, we have to really hit the ground running, so we need to focus on kind of the near term things that we have to get some clarity around,

realizing that some of the stuff may have to go to a parking lot that we help inform our decision when it comes to, say, 2013 and 2015.

Betsy Humphreys – National Library of Medicine – Deputy Director
It was looking forward to those later stages that I thought we should start thinking about now, certainly.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Okay. I think there's plenty of material in that discussion for future agenda items in future meetings, and I'm sure we'll be revisiting this. What I'd like to do is see if we can move along to the next discussion item on our agenda, which is on the device terminology issues. Betsy, if you could lead that discussion, I would appreciate it.

Betsy Humphreys – National Library of Medicine – Deputy Director
Okay. I tend to lose track, but in terms of meaningful use, device terminology becomes relevant in the context. I think first becomes relevant in the context of communication with home health devices, but I may be missing that. But at any rate, it becomes relevant. The FDA has a desire to settle on a device terminology in conjunction with their desire to move ahead with the universal device identifier, both as part of the larger and highly desirable plan, in my view, to move to the notion of a structured product label for a device, similar to what has been required over the last few years from drug manufacturers related to drugs.

Some of the people on the call will have some of the history, but in effect, there has been an international effort driven by the regulatory agencies in multiple countries for a number of years to develop a common device nomenclature that would be used in device regulation and potentially in other areas. And this development is called the global medical device nomenclature. I will not go into the history of it, but there are three issues in terms of achieving, it seems to me, in terms of achieving FDA's laudable goal of having a standard device nomenclature connected to it with individual devices, with device identifiers, and them categorized using the standard terminology and structured product labels.

GMDN, there are three, it seems to me, three issues around it. One is whether GMDN, as currently constituted, offers a good base for a device terminology, not only for device regulation, but also for all the other purposes for which it would be good to have a standard device terminology in healthcare and in patient safety monitoring and any other reason we could think of for having a device nomenclature in the healthcare system, and that's one issue.

The second issue would be if in fact GMDN looks like a good candidate for that. Does it have appropriate access conditions? That is, can the people who need it, who would have to use it throughout the healthcare system have access to it under reasonable terms, and does it have a reasonable governance and ongoing trajectory that would give confidence that it was a good candidate for a U.S. standard. And the FDA is interested in moving ahead to get answers to all of those questions.

The GMDN has very recently, the entire thing, as it currently stands, has very recently been turned over to NLM to do an initial analysis of the coverage of it. We've had it for a couple of weeks. Our initial assessment of it in terms of its just, I have to say, based on very brief initial analysis, is that it looks like a well formed thing with some 30,000 device concepts in it, many with synonyms. It is a poly-hierarchical system. And it, on the face of it, looks quite reasonable.

The issues that it seems to me, and I'm just bringing this up preliminarily, is getting us to a point where what needs to be done to give us a level of confidence that this is an appropriate starting point for a device terminology for the U.S. healthcare system, and it seems to me that it would be useful to attack

that problem or try to get the data that we can around that problem at the same time the FDA and others are pursuing the issue of improving the access conditions from what they currently stand, and also looking at how to provide greater assurance that there is reasonable, that there will be good governance and ongoing support for the maintenance of this terminology.

M
What are the IP issues around it, Betsy? I mean, when I go to their homepage, the first thing I see is MasterCard and Visa.

Betsy Humphreys – National Library of Medicine – Deputy Director
The current IP arrangements around it would, in my opinion, and I don't think the FDA disagrees with this at all. The current IP arrangements are somewhat unsuitable for any terminology or system that would be used as a standard across the healthcare system. There is a licensing regime, but the licensing system for this terminology is unusual to say the least in the sense that you license the terminology. You get the terminology, but you don't get access all of the unique codes and identifiers for the terms within the terminology. You get access to a subset of them.

M
Even after you pay?

Betsy Humphreys – National Library of Medicine – Deputy Director
Yes.

M
Wow.

Betsy Humphreys – National Library of Medicine – Deputy Director
This is a system, which essentially was built around the notion in some sense that the first user group of the terminology was in fact the regulatory agencies and device manufacturers. And therefore, in a way, the device manufacturers were licensing the codes that would be relevant to their own devices.

M
Sounds identical to Medra in a way.

Betsy Humphreys – National Library of Medicine – Deputy Director
No, I think the Medra system is actually licensed in a more sensible way. I don't want to put any – I'm sorry for that editorial remark. At least in a more standard way, if you license it, you can use it all, I believe. No one is claiming that. Really no one, the FDA chief on that list, is saying that this access arrangement, as it currently stands, is appropriate. So there is a set of activities going on to attempt to move that to a more sensible approach.

But, of course, even if we were able to announce today, or at least I believe this is true, unless other people on the phone might correct me if I'm wrong about this. Even if we were to say, hey, great news, GMDN is available under these wonderful terms. Everyone in the United States can use it. I think we would be faced with a set of questions about, well, what does it looks like. And does it cover what we need for hospital inventory control and maintenance of, you know, patient safety issues around embedded devices or home monitoring or whatever. I think that unless someone here knows of some sort of evaluation of this from the point of view of applicability in healthcare, does anyone? I do not.

Stuart Nelson – NLM – Head, Medical Subject Headings Section

This is Stuart. I gave up on screaming a while ago. I can only say that my preliminary look at it, it looked very reasonable to me, the preferred term names of the actual device … reasonable. The hierarchical terms were a little less so, and if they…. Overall, I thought it was certainly worth closer examination and investigation because it looks quite good.

Betsy Humphreys – National Library of Medicine – Deputy Director
I don't know if Stuart had finished his statement or not. At any rate, I'm interested in thoughts about what the group here might recommend as reasonable steps for sort of fairly rapid assessment of this vis-à-vis healthcare while other issues are being addressed in terms of making it more available and insuring that it will be in a robust environment for maintenance over time.

M
Betsy, two other questions about it: Could you just note, how does it compare with … at least in terms of licensing? And secondly, how is it going to relate to FDA's planned assignment of discrete codes for every product, you know, if they're meant to be tied together?

Betsy Humphreys – National Library of Medicine – Deputy Director
I believe that probably Terri Reid has called in members of the public and might be able to comment on – she's with the FDA in the device group, at the end of this. But yes, they intend to – the intension of the SDO is to have unique identification of the device using UDI … identifier, and then require that the device be categorized or described with one of, you know, the terms from the GMDN. They are interested in moving forward with a draft regulation that would require that and require basically, I believe, device manufacturers to produce structured product labels that would have both of those things in them.

M
Betsy, I see that it's based out of the U.K., and that it's very tightly aligned with Udramed and other European initiatives. If we were to adopt it, if prior experience with some of those communities is any guide, what kind of influence would we have in terms of its content, maintenance, update, and scope?

Betsy Humphreys – National Library of Medicine – Deputy Director
I think that what is attempting to be looked at is the incorporation or, shall we say, moving the maintenance activity and governance to an even more overtly international approach. Although, right now, the GMDN agency has a board, which includes U.S. representatives, and the FDA has been very influential in the actual technical development of the vocabulary.

Doug Fridsma – Arizona State – Assoc. Prof. Dept. Biomedical Informatics
Betsy, this is Doug Fridsma. A couple of questions to the committee to kind of consider with this because, as the regulations stand right now, we have regulatory authority over EHR or EHR modules, if you will. The module satisfies some function within the meaningful use criteria. Over the course of the next couple of … increasing amounts of discussion…. Can people hear me okay?

Betsy Humphreys – National Library of Medicine – Deputy Director
Yes.

Doug Fridsma – Arizona State – Assoc. Prof. Dept. Biomedical Informatics
Okay. I just hear some background noise in there. That we may need to think in terms of the HIT policy committee, in terms of how they view the meaningful use criteria, definitions around modules that have certification. Certification criteria right now are restricted or are primarily focused on electronic health records. But one could imagine that, based on recommendations, that that could potentially be expanded.

Then I think understanding how these initiatives with the devices fit into the ecosystem within ONC and within the priorities that we have for kind of getting the primary care physician in an electronic format. I think it would be useful to have the discussion around this within that broader context. Where should we be spending our resources, and where should we be spending our efforts, knowing that there are some things coming down the pike that re not quite fully flushed our or enumerated, so I think we need to make sure that we frame it in that context.

Betsy Humphreys – National Library of Medicine – Deputy Director
Doug, I don't disagree with you at all. The issue that I think that some of the issues that relate to these terminologies definitely take a while to resolve, so the issue is trying to figure out where we're headed so that we can resolve things in the best way, which may take time. I think that as Terri may want to comment at the end when we bring the public in, the FDA has a desired timeframe here, which may not match the meaningful use timeframe, and obviously that will be a high level discussion … try to work that out. I do think that given the emphasis on home healthcare and home monitoring and the … generation getting to retirement age and so forth that we do have to consider going forward that the lack of a standard for devices is a very big missing piece.

Okay. Well, I don't. I hear, based on the comments that I heard here, I think that from the point of view of the group, you may be focusing on the Missouri approach in terms of show me regarding resolution of some of the access and governance issues on this.

Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant
This is Floyd. Actually, for measurement and clinical decision support, I think of device terminology as definitely necessary. I just can't comment on the specific one that you're mentioning in detail.

Betsy Humphreys – National Library of Medicine – Deputy Director
Yes, no one can. That's part of the problem.

Floyd Eisenberg – Siemens Medical Solutions – Physician Consultant
Right.

M
But, Betsy, I'd like to support. I mean, this is really support from Floyd, and you're probably … statement about this. This is something we're missing. It's a huge gap, and we really need something. There are competing alternatives, and so I agree that I think there is some Missourian in us, but I don't think we should let this lie.

Betsy Humphreys – National Library of Medicine – Deputy Director
No, and I have to say, obviously, that what I'm interested in, I think that the FDA definitely has the right idea in terms of moving towards structured product labels and standard device terminology and standard identifiers for devices. I think that we do need to determine whether all different….

I am in entire agreement that we need to assess this thing and all aspects of it in comparison to other alternatives that may be available. I do think that we need to come up with some steps and execute them, so we will get a decision about this issue sooner rather than later. Those on the call who might have been involved in the CHI process earlier or know about it know that however many years ago that was, and it's quite a few now, basically this was set aside as one that we couldn't make a decision on yet. And I think it's got to be at least five or seven years ago that we couldn't make a decision on it. So what I

would like to do is see us put together some sort of a strategy, so it won't be another five or seven years before we make a decision on it.

Patricia Greim – VA – Health System Specialist: Terminology
Betsy, this is Patty Greim. Did I hear that some of the concern is about balancing incentives related to emerging, identifying, and developing emerging standards and, like, compensating organizations or groups for the work of developing standards? Is that--?

Betsy Humphreys – National Library of Medicine – Deputy Director
I think that in this particular case, because—and this would be my opinion, and maybe others would disagree. In this particular case, I believe that the FDA has made very substantial contributions to the development of this vocabulary. So I think the issue is more do we have a reasonable forward process for making it generally available to people and insuring that it is maintained in an environment that would provide, you know, as Chris was alluding to, reasonable U.S. input into the way it moves forward.

Patricia Greim – VA – Health System Specialist: Terminology
Thank you.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
I think then, with that, we may be ready to move on to our last agenda item. If you could, I guess, move the Web presentation to the first recommendation, what I'm trying to do here is to capture … preliminary draft recommendations for our discussion today in areas that we heard about repeatedly in our public hearings. The hearings really were on a set of governance questions that have to do with recommendation one, but we did hear a number of panelists say that they had some immediate infrastructure requirements in their testimony and their recommendations to us, so I tried to capture that.

So basically if I were to characterize these two recommendations, the first one about having the central agency managing processes, that's something that I think we heard from almost every single panelist. There were differences in terms of the scope and how it should operate and so forth, but the fact that a single central agency in the federal government was recommended to manage processes related to subsets and value sets for meaningful use was pretty much a unanimous recommendation, so this one, I think, the devil is certainly in the details of wordsmithing the recommendation, scoping it, deciding what's in, what's out, and how we present it. But this, I thought, was pretty unanimous.

The second one, when we get to that, is one where different panelists had widely varying recommendations, and so this is more of an attempt to, in the second recommendation, is more of an attempt by me to navigate through what we heard, reviewing the different testimony, and trying to find a path that could potentially accommodate the different viewpoints.

Let's turn back. In recommendation one, a central agency must manage specified processes for vocabulary value sets and subsets related to meaningful use. Does anybody disagree with the gist of this at that highest level of the statement?

M
It's hard to disagree with, but it's very general. I mean, you don't know what it really means.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Okay. Then in terms of what the processes are that should be controlled, owned, managed by the central agency, you can see that what's listed here is pretty much straight from the discussion, the testimony. And, in fact, even the questions that we provided to the panelists. The processes should include the

creation, maintenance, and dissemination of value sets and subsets of the standard vocabularies. Again, this is related to meaningful use.

M
Going back, Jamie, to the first statement is when we say a central agency, is that intentionally vague to not say a government agency? Is that intentional that that doesn't say that this is a government group?

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
I think it is a government group is, I think, what we had discussed, and maybe it should say that right up front.

Betsy Humphreys – National Library of Medicine – Deputy Director
This is Betsy. I would have to go back to look, but I would – and obviously it's the committee's group. It's this group's recommendation. I'm trying to remember where we did not hear some people suggesting that this be the famous private/public sector….

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Yes, we did hear some of that, but I think a large preponderance of the testimony that we got really thought that this should be a federal government function.

M
That was certainly my thought, and I agree that it wasn't unanimous, but I thought it was more or less overwhelming that this should be a government agency.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Okay.

Stan Huff – Intermountain Healthcare – Chief Medical Informatics Officer
I guess I'm positing that to see whether the workgroup agrees, and we could just change that, or whether in fact it is in question and we have to go through some other process to decide.

M
Your comment, Stan, is consistent with my interpretation of the testimony. I agree that the overwhelming preponderance was in favor of the government agency.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Okay. So then perhaps the recommendation should say a central agency in the federal government should manage specified processes, and we could actually potentially wrap a scope statement into the statement of the recommendation, so that would say a central agency in the federal government should manage specified processes for all vocabulary value sets and subsets related to meaningful use. Does that sound right?

M
I would be in favor of that.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Okay. Is there any other discussion that point of it being a federal agency? Then let's go through and say, well, what processes? Actually, let's skip the process discussion for just a moment because one of the other things that we heard was the importance of having this agency have both legal authority related to meaningful use, and also have funding capability for licensing and for funding dissemination,

education, outreach, any other things. Let's talk about the legal authority that we're recommending. The way it's written here, the central agency should be legally authorized for meaningful use, and should be able to provide funding, as required, both for these processes and for licensing. Is there disagreement or a discussion on that point?

M
What constitutes a legal authority and by whom? Does this mean an act of Congress is needed to pass this?

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
I don't think so. I mean, I think maybe this is a regulatory authority established by some mechanism. I don't know.

Betsy Humphreys – National Library of Medicine – Deputy Director
Yes. I think the issue of authorization is a somewhat vexed one. However, the idea here, as I understand the recommendation of the group, would be that in fact this responsibility should be based on something that will make it stick over time, right?

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Right. Some form of legal authority, but what that is, I'm not the lawyers on this.

Marjorie Greenberg – NCHS – Chief, C&PHDS
Yes. This is Marjorie Greenberg. Did we agree on everything under the processes?

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
I wanted to come back to that. I wanted to talk about the legal authority, and then come back and talk about the processes.

Marjorie Greenberg – NCHS – Chief, C&PHDS
Okay. I just thought maybe I missed something. Okay. Thank you.

M
On the legal authority, I mean, unless authority to do this is already implied or explicit to ONC or some other agency, I would answer that I think we're on shaky ground to assume authorization in any other way. And so, as hard a pill it is to swallow, I think this won't actually be settled until there is legislation that establishes this. I mean, as I understand it, you guys in the government can tell me. But … something in the law somewhere that gives an agency this responsibility, you guys could be rightfully accused of doing things that have not been approved by the legislative branch.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Not being a government person, but I think what we had intended here was that the legal authority is limited to the standards regulated in meaningful use for which ONC, I think, pretty clearly does have the authority to manage these things. Therefore, could either establish a central agency in itself or grant that authority to potentially some other part of the federal government to manage. Again, this is where I'm on shaky ground because I don't know.

M
Could we seek legal opinion on that because my impression is that it's different. I mean, that ONC has a responsibility to set and enforce standards. I don't remember seeing anything that said they should

manage the standards or that they had authority to manage, especially the terminologies. I mean, if that's true, then I'm excited. I'm happy.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Let me ask. Doug, can you provide any insight on that? Wouldn't this fit into the overall framework for the process of managing interoperability standards that we've been talking about?

Doug Fridsma – Arizona State – Assoc. Prof. Dept. Biomedical Informatics
We're legislatively required, and this is certainly within the IFR, to produce the certification criteria and implementation specifications to support meaningful use. Within those very, very broad constructs, one could argue that value sets and subsets of standard vocabularies are necessary for interoperability to achieve meaningful use and would be part of either the EHR certification criteria or the implementation specifications. I think, within that, that would sort of fall within the broad, legislative mandate that we have.

Now because we have to go from 2011, 2013, and 2015, and be able to sort of incrementally bring people on this escalator and move them up to more complex ways of exchanging information, that would suggest that there is a need to kind of keep those value sets going at some point. I don't know. We haven't necessarily had OGC weigh in on this, but very often legislation isn't necessarily going to provide you with the way in which you achieve those goals from an operational perspective, although they will set those goals for what it is that they want to have accomplished.

I think, I mean, we clearly have been working internally within ONC, and we presented this after, I think, the last meeting, this interoperability framework that is aimed to help us manage the process of getting implementation specifications and certification criteria out there. And so there certainly are efforts underway to operationalize and make it possible for us to manage the things that we have legislative mandates for.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
But do you think that these kinds of processes for the implementation specifications that are value sets and subsets, does this fit within that framework, potentially?

Doug Fridsma – Arizona State – Assoc. Prof. Dept. Biomedical Informatics
I think potentially they could. I think one of the things that we need to think about is we also have requirements for the nationwide health information network. We have requirements for some other things in which we need to sort of organize and manage specific processes. And so I think we have to be careful about kind of where this fits in that, and I don't think that we've really articulated that just yet.

M
Well, I … so it now becomes clear why we relate it to meaningful use. Again, thinking from the public, sort of from the public man on the street perspective that that leaves open then the opportunity that we – assuming that what you said is true, Doug, that the current legislation gives ONC the authority to do meaningful use terminology, then we could end up with somebody else in the federal government doing it for clinical trials or for cancer research or for – and so we could end up in fact without. This would be a central agency for meaningful use terminologies, and we could end up basically with a lot of other federal government agencies working on or supporting very similar work in slightly different domains.

M
I think David Blumenthal right now is chairing a health IT committee that includes Aneesh Chopra and … and there are a number of other people to try to figure out standards and values, and standards and

interoperability across the federal government. They've just had their first meeting, in part to help address that issue, not specifically. I mean, that's not why it was sort of set up. But just a recognition of the need to be able to have some coordination across the federal agencies with regard to standards, interoperability, and those sorts of things.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Let's go back and talk about what the processes are, unless there's more discussion on that point. What I'd like to do is….

Betsy Humphreys – National Library of Medicine – Deputy Director
This is Betsy. I appreciate everything that Doug has said and so forth, I mean, on this issue. So I think that it seems to me that were this recommendation to go forward, and I not right, Doug? There would have to be some due diligence to say, okay, does this fit within the legal authorities and the frameworks and other things that we're setting up, right?

Doug Fridsma – Arizona State – Assoc. Prof. Dept. Biomedical Informatics
I think when you start focusing on meaningful use, I think that does kind of fall within the purview of ONC. I think there are a couple of things about creation, maintenance, and dissemination. There is a very strong preference within the federal government to adopt standards that have been developed through public/private partnerships or through organizations that have ANSI accreditation and sort of a lot of public input. There is a decided bias against the federal government creating their own set of standards unless there is simply nothing out there to help support the use cases or the like. When it comes to things like creation, it isn't necessarily that the central agency should create these things, but perhaps there's a process that helps identify where those things need to be developed.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Right, and I think that's exactly the point of these processes, just to kind of get back to the main body of the recommendation. We're not suggesting here, I think, that the central agency would actually produce any standards, create, maintain, or disseminate any value sets, but would rather be the owner of the process that does decide what is needed that would make decisions and have authority to decide how, in the case that you just sited, Doug, how the public/private processes would work in relationship to meaningful use vocabularies and have a single authority across all of the different kinds of value sets and subsets for all the different vocabularies.

Marjorie Greenberg – NCHS – Chief, C&PHDS
Jamie, you said one thing, but then I wasn't sure about the next thing you said. This is Marjorie. It seems to me that this central agency wouldn't necessarily be placed where it's decided what is needed and who produces what is needed. Some of these are really policy issues that I would think recommendations would come from the policy committees. This would be ONC, but also departmental and maybe broader, you know, process in which some of these things are decided.

But the central agency would have the authority to sort of implement these decisions and to make sure that – and certainly being a knowledgeable source itself, would contribute to the decision-making process. But the way it's written now, this is a lot of authority for whatever this agency is, when I think our main goal is coordination, lack of following certain principles, lack of redundancy, etc., so that's my concern.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Yes. I don't disagree with any of that. I think also managing the process of deciding what is needed doesn't mean that this is … agency that makes all the decisions. But I think we're managing the process, perhaps we can try that the way you did as requiring coordination across the different points and the

different groups. And I would also point you to the last bullet on the page here of promoting inter-departmental and inter-agency coordination because one of the things that we did hear a lot of is the fact that, in fact there are different charges and different authorities and responsibilities of different federal departments and agencies that are looking at different areas of research or statistical analysis or whatever their particular charge is that is independently authorized. And so, in that case, promoting coordination is, I think, as far as we can go. But with respect to the defined value sets that are going to be testable, measurable criteria for meaningful use, those are things that there ought to be more centralized control over, as I think what the recommendation is getting at.

Stan Huff – Intermountain Healthcare – Chief Medical Informatics Officer
So changing the subject then, the fourth bullet point that says deciding what formats are exchanged in, I certainly agree with that, but I would probably even go past that and also say something about the formats in which they're maintained. And maybe that's what you intended as well. And I don't necessarily mean that physical file structure, but if you will, the logical and functional capabilities of these things. What I'm thinking is that we do want to be able to say that value sets should have an owner. That was sort of one of the requirements that came out of a lot of the discussions and, you know, there should have – anyway, those kinds of things. Is that implied as well, or was this intentionally more restrictive to just talk about exchange?

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
That ownership is a good issue. I'd like to hear what others think about that.

M
I think the emphasis of Stan's comment wasn't so much on the ownership, but the adherence to, if you will, an abstract representation syntax that would allow for comparability and consistency. You don't want every value set maintainer to come in with an idiosyncratic format.

Stan Huff – Intermountain Healthcare – Chief Medical Informatics Officer
Right.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Right.

W
But on the other hand, there's also the issue of who has responsibility over what areas. It would seem to me, if the value set is required for meaningful use, then we all ought to know who it is, who is responsible for maintaining that one.

M
Yes.

W
Now this raises an interesting question. This is just for meaningful use, I gather, but meaningful use will evolve. Does that mean … central agency have at least a coordination or a dissemination or other facilitating role in value sets that could be used for meaningful use, or that might be in the future or, I mean, have an important use in electronic records. We talked about how slow the regulatory process is, but if it's only for those things, those value sets that are actually in regulations, then it might not be as robust a coordination function as would be desirable.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy

Well, it may be useful to address that question. It may be useful to go to the second draft recommendation where one of the things that I tried to do in drafting this was to capture the discussion that we had in the hearings about differentiating the tight control over specific value sets that would be required by regulation versus loser control over subsets that would be for the convenience of implementers that are not required by regulations, but that would be enabling more in the form of guidance as opposed to regulatory requirements. And so maybe that, some flavor of that point on what deserves or what requires tight control versus loser enablement, maybe that belongs up in the first recommendation as well.

W
I mean, you could give it a very narrow, kind of that more narrow responsibility and see how it works. And if it seems to meet needs and work successfully and collaboratively to people's satisfaction, it could expand. It's at least optional role, but I'm just thinking a lot could slip out here. I mean, you don't want it to be too broad, but don't want it to be too narrow to almost be meaningless. I'm interested in what others think.

M
I kind of like the wording the way it is now. It just says related to meaningful use, which to me casts it broader than saying subsets only specified in standards or something like that. And so the fact that … subsets related to meaningful use, I think, allow us the greater flexibility that you described, Marjorie, to put value sets in there that might be generally useful, and EMR because they might be used in future rules rather than they have to be used in an existing rule before they would fall under this. So I kind of like the way it's stated there as related to, which I think allows us some flexibility and casts the net a little broader.

W
Yes. It doesn't say required by. I think that's a good point. Of course, you know, I guess the committee report would show that we have that broader interpretation of related to.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Great. Marjorie, getting back to your earlier point, perhaps instead of saying processes controlled by the central agency, perhaps it ought to say processes coordinated by the central agency. Does that address your concern there?

Marjorie Greenberg – NCHS – Chief, C&PHDS
I'm much more comfortable with that, but I don't know if others might think that was weakened it too much.

M
I think, in the term of ownership, that's true, but I don't think that distributes well across the other things. I would like them to be authoritative in saying something about the exchange formats, for instance.

Marjorie Greenberg – NCHS – Chief, C&PHDS
Yes. As you go down the list, the top ones, I think, need more coordination or oversight. But even then, though, if you're coordinating, deciding what formats they're exchanged in, I mean, at the end of the day, a decision has to be made on each of these. So I wouldn't want to weaken the central authority too much, or you could. I suppose you could break this out. I don't know. Certainly, I think, on deciding what's needed and who produces what's needed, that, I think, is a coordination or oversight kind of function. Maybe you could say processes overseen by the central agency.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Exactly, or processes managed by the central agency. Then in each pullet point, we could say, for example, coordinating what is needed and who produces what is needed versus controlling who reviews and approves value sets and subsets for meaningful use.

M
Yes, I think that's a good approach.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
How about the first sub-bullet there would be coordinating what is needed and who produces what is needed, and then the next three would be controlling actions, so controlling who reviews and approves, controlling how and how frequently updates are published, and controlling formats for exchange and maintenance.

Marjorie Greenberg – NCHS – Chief, C&PHDS
Yes. It's just that there has to be a lot of input into this because, you know, how and how frequently updates are published. Well, some of these things are controlled by other factors. So they just can't be controlled by the central agency. I mean, in some cases, there's actually legislation about how often certain vocabularies are updated. It just seems that this can't be that authoritarian a process. I'm not saying this with any agency in mind, but clearly this is right now a very distributed process.

We want to bring more rationality into it. We certainly want to reduce redundancy. We want to serve the needs of the users, and we want to certainly promote interoperability. But we can't take what's a really decentralized, distributed responsibility now and sort of just turn it on its head and have this central agency controlling everything almost. I'm very uncomfortable with that word "control", I guess, for several of these.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
I think that in terms of the value sets and subsets for meaningful use, is there any disagreement that that could e controlled by the central agency?

Lisa Carnahan – National Institute of Standards Technology – Chair
Jamie, this is Lisa, and wouldn't that actually just be ONC if, for meaningful use, those things are articulated through the IFR?

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
I think that some of the value sets certainly we expect to be in regulation in the IFR, but I don't think we expect any of the subsets to be in regulation. And there may be other value sets that are also more in the form of guidance.

Lisa Carnahan – National Institute of Standards Technology – Chair
Okay.

Betsy Humphreys – National Library of Medicine – Deputy Director
Yes. I think that … back to what Doug said, we can't expect all of this to be in regulation because it wouldn't work well.

Lisa Carnahan – National Institute of Standards Technology – Chair
Right, but I guess what I was saying is then, and I don't want to populate this slide too much, but I think you want to kind of head that off right away, recognizing that, for a certain set, ONC, through the IFR,

does have purview, and then articulate further out. I guess, while I see related to meaningful use, you know, when you say meaningful use, it kind of….

Betsy Humphreys – National Library of Medicine – Deputy Director
My view of all of this is that I think I agree with Marjorie's comments about where we are and where we want to go, and we don't want this actually to be somebody sitting in the back room sending down decrees with no interaction with the people who have to use it. I think that the issue is that what we lack, or at least as I have understood this, what people believe they lacked was anybody who, in the end, could knock heads together and say, all right, or right the thing that would say NQF is the lead for establishing value sets for this.

NQF has this process, and they elicit feedback, and they do all these things. So go play with them because, in the end, we're going to take the ones that come out of that process. And that's for the quality measures.

Now over here, we have these other needs for public health or whatever we have … CDC or CDC plus the states, or whatever it is. Somebody is in charge of that. They are going to be responsible for coming up with the final recommendations and managing the process for that. If that's what your concern is, go participate in that process because that's the one that's anointed for this particular thing. I was getting a feel from a lot of the commenters that they were not at all interested in having a bunch of feds tell them what to do, but they would like to know where do they go and what games should they be playing if they are very concerned about value sets in a particular area, which is the most important of the five games that are on the board now in terms of what's going to come out the other end and be anointed for use across the U.S.?

Lisa Carnahan – National Institute of Standards Technology – Chair
I don't know if it was Marjorie that had the comment about controlled. I would prefer coordinated as well.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
I've gotten a lot of input from this discussion. I will try to soften it appropriately and draft up a revision to send out on this one. But in the interest of time, I'd like to go on to the next one, if we can do that, because this second recommendation actually was not the original intent of our hearings to gather input on infrastructure and tooling. But one of the things that we heard repeatedly from a number of our panelists was the need for a central repository for value sets and subsets and a single set of processes.

Now there was also, I would say, a divergence of opinion where some folks feeling that this absolutely had to be completely decentralized. I would say that a preponderance of our panelists felt that a central repository was needed, and so what I've tried to do here is to capture sort of a flavor of all of those things by saying there should be a central repository as a starting point … central download capability, but the decentralized private sector alternatives should also be enabled. I'd love to get folk's viewpoint on this recommendation. In the first place, should we make this recommendation or not, but also on the content of it?

M
I think the central repository is very important as to whether, and if it is the central repository, it probably should be the authoritative central repository. But I guess it doesn't mean you should prevent others, maybe repositories, to meet, you know, niche uses or whatever. You know, it's the American way, but I think you would want a central authoritative repository.

Andy Wiesenthal – Kaiser Permanente – Exec. Dir. CIS

Jamie, this is Andy. I would fully support that. I think it's akin maybe even a little bit more robust than what our … today for guidelines. People with lots of resources maybe do their own value sets and have their own repositories, but the large swath of U.S. healthcare won't have those kinds of resources and will need a central, reliable, central repository.

Clem McDonald – Regenstrief – Director & Research Scientist
Could I just comment on that in terms of, do you mean repository always, or do you mean a linker to the source? If you have more than one source, you're going to have delays between the central and the original source.

Andy Wiesenthal – Kaiser Permanente – Exec. Dir. CIS
Clem, I'm thinking of a single source. And anybody who wants to develop their own subsidiary repository for their own purposes is certainly free to do that, as Marjorie said … authoritative….

Clem McDonald – Regenstrief – Director & Research Scientist
Let me just think about it. Does ICD then, does that make up its own codes?

Andy Wiesenthal – Kaiser Permanente – Exec. Dir. CIS
We're not talking about that. We're talking about subsets here, not….

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Right. Subsets and value sets that are required for meaningful use. And this actually goes back to something that we've heard in spades from the implementation workgroup and the other hearings and meetings of the standards committee, our parent organization, which is make it simple for implementers, have a single source for vocabulary information. So I think that that … majority of our panelists that we had in these hearings who also recommended a single or central repository, and so that's really what this was aimed at, Clem. It's not saying that each standards organization doesn't produce their own codes. But it's saying that for purposes of meaningful use, EHR implementers need a single place to go.

Clem McDonald – Regenstrief – Director & Research Scientist
So we're really just talking about the subsets defined specifically for meaningful use because the other thing that the vendor said in that testimony is they didn't really want a bunch – they want to just have the space that they should work in, but they didn't want to have people inventing or telling them which subsets to use for a particular specialty on a particular menu. But those wouldn't be meaningful use subsets, so I guess that's okay.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Well, no, I think those would be meaningful use related subsets, and we're saying that there would be – the recommendation here is to have lose control to enable the publication of a wide variety of many different subsets for the convenience of implementers, including those specialty ones.

Clem McDonald – Regenstrief – Director & Research Scientist
Well, they actually … all of them said the same thing in that one round of testimony. They said they want to have the flexibility to do what they worked for their customers. Say you've got a problem list, and making a subset for a particular area. They wanted the freedom to do that. They didn't want that delivered to them.

M
Yes, but there was another group, Clem, that actually said that they thought it would be useful if what we came to call the convenience list were at least published as a starter set. Now this doesn't have

regulatory requirement, but having that in the central repository, I think everybody saw as a feature. People could value add and modify from it. That's fine. But still having it in the central repository was….

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
I think what we're trying to capture in this recommendation is to enable those distributed, privacy sector alternatives that I think Clem is talking about, while also maintaining a central repository that would include the frequency based subsets, some of which are in fact referenced in the implementation guides, such as the 95% of routine lab tests most frequently named in HEDIS reports.

W
Now I think Clem does raise an interesting point about whether you want a link or an actual repository, particularly when you're dealing maybe with, you know, a fuller vocabulary rather than a very specific subset. And I think maybe the central agency, it would depend upon what kind of relationship they could establish with some of these vocabulary holders, and because … have to have certain criteria. But they may feel that if certain criteria are met, they could just link to the latest version of that rather than having to have it in the repository, and others may be for the specific subsets, they would actually want them all there. I don't know. I mean, I think this needs to be investigated more.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
But this was also something, I think, from the viewpoint of the users and the implementers that the standards committee has heard in spades that they just want a single place to go, and they don't want to be pointed off from their, into all kinds of different directions, and that was one of the problems, frankly, with the HITSP specifications and some of the previous attempts at these implementation specifications is that they were just pointers, which became very difficult for the average EHR user and implementer to work with, and they just want a single place to go that actually has everything.

W
Including the full vocabularies and everything else?

M
Yes.

M
Yes.

M
Yes.

M
Well, then you're getting back to the problem of, well, I don't think that always works.

W
I mean, what about if CPT or something were – I don't know, maybe it wouldn't be in meaningful use.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
I think, for the purposes of this recommendation, and just for this particular discussion, we're just talking about the value sets and subsets that are related to meaningful use. I think that when we talk about the complete vocabularies, I do think that's a separate discussion. I think, from an implementer's viewpoint, that's highly desirable, but that's not what this set of recommendations really is all about.

Stan Huff – Intermountain Healthcare – Chief Medical Informatics Officer
Well, yeah. I mean, my sense, and representing my own view of our needs at Intermountain, I very much want this to be a repository. By the tone of voice, I hear people saying, gee, I don't want to have to – we don't want to copy these vocabularies there. But I can tell you that as an implementer, that's exactly what I want. I want them copied here … this page, and download them. And the download mechanism is the same for all of the terminologies. They don't have to worry about how I download SNOMED versus how I download LOINC versus how I download CPT codes.

It may be that we don't end up there, but I can tell you that what I want is in fact those terminologies that I need to implement meaningful use to be in a place where I can go. I see a list of them. I click on it. The download mechanism is identical for any of those that I need to use in my system. I recognize that that creates a maintenance burden or that I might have to click on a particular version if I want a particular version. But it makes tremendous more sense to me to do this in a central agency than have every individual user have to essentially manage the same thing.

Christopher Chute – Mayo Clinic – VC Data Gov. & Health IT Standards
And I can tell you Mayo Clinic wants exactly what Stan just articulated.

Andy Wiesenthal – Kaiser Permanente – Exec. Dir. CIS
So does KP.

Patricia Greim – VA – Health System Specialist: Terminology
And the VA would benefit from that as well.

Andy Wiesenthal – Kaiser Permanente – Exec. Dir. CIS
Well, the standards all want it.

M
It sounds like I'm swimming upstream, but there was a proposal from – the CDC was proposing that what they would do is they'd demand a specific user interface so that they could pull it, so it'd come out the same. The problem is, with making copies, if it's made primarily at one place where it's copied faithfully at the other place, versus having sort of a rule with an API in it where you could still pull it down, but you wouldn't have to have the delay. So some of the drug vocabularies, RxNorm is produced how often now?

W
Week.

M
Every week. Can this central thing manage that, copy the whole body in every week? Those kinds of issues, I think we ought to think about.

M
I disagree….

M
…process that would make it look like they were all there in some cases. They may be all there, but you wouldn't have to have it be that way.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy

I think what we're talking about here is that we can set some requirements for what we think this repository function ought to be, and it comes down to essentially the convenience of the producers versus the convenience of the consumers.

M
No, I'm actually arguing against specifying how it's done rather than saying what you want it to look like. If you say what you want to be able to do is go one place and pull it all down, you shouldn't have to say where it's stored.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
I think, if the specifications workgroup, the way it was described by the users of having exactly one way that they all work, that's, you know, then I think perhaps….

M
Yes, then it may end up being one repository, but there might be other solutions.

M
We're getting hung up on the word "repository". I think what I've heard everybody say is you want to have one stop shopping. However the shop and the shelves are organized, we can talk about later, but Stan wants to go one place. I want to go one place. Everybody wants to go one place, and that's what we should set up. However it works technically and however it's organized, there'll be a lot of detail we have to pay attention to.

M
That's fine. Just don't specify how the inner workings go.

M
Yes.

M
Right.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Okay. We're almost up. We only have a couple minutes left scheduled for this call. Is there anything else about this recommendation two that needs material change?

W
I thought we were actually scheduled until 1:00, though I'm not arguing for it.

M
I was just checking that too. Yes, I think we've got another hour.

Judy Sparrow – Office of the National Coordinator – Executive Director
Yes, we are on for 1:00.

W
I wouldn't mind taking a five-minute break if we're going to go the other hour.

M
I'd be glad to quit early because, yes, I was….

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Well then I have a problem because….

M
…another hour?

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
I don't have another hour. Sorry.

M
Let's just finish up then.

W
That's fine. I wasn't supposed to be here in the first place, so it's okay with me.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Yes, and for those who are just back from Europe or didn't go to Europe, I appreciate you being here. Apologies for the confusion on the schedule then because we are indeed booked for another hour, but unfortunately, I didn't put it on my calendar for another hour, so you all can go on without me if you want to do that, or we could cut it short.

M
I think your second recommendation looks pretty good.

W
Yes, I think we're in good shape.

Betsy Humphreys – National Library of Medicine – Deputy Director
Judy, do we need to open it up for any public comments?

Judy Sparrow – Office of the National Coordinator – Executive Director
Yes, we should take a few minutes for public comment in case there are any. Do you want to do that now, Jamie?

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Please.

Judy Sparrow – Office of the National Coordinator – Executive Director
Operator, can you ask the public if anybody wishes to comment?

Operator
(Instructions given.)

Judy Sparrow – Office of the National Coordinator – Executive Director
Thank you. While I have you all, just to remind you, I have two calls scheduled for May: May 4th from 1:00 to 4:00 eastern time, and May 12th. I have it just 10:00 to 11:00 eastern time. Jamie, do you want to keep those calls, or what are your druthers?

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy

I think we should keep those.

Judy Sparrow – Office of the National Coordinator – Executive Director
Okay. I'll make sure everybody has a calendar invite.

W
When is May 4th?

Judy Sparrow – Office of the National Coordinator – Executive Director
One o'clock to four o'clock.

W
Okay. Yes, please invite.

Judy Sparrow – Office of the National Coordinator – Executive Director
I will. I'll do that today. Pamela will do it. Thank you. Any public comments, operator?

W
What was the other date?

Judy Sparrow – Office of the National Coordinator – Executive Director
May 12th.

W
From?

Judy Sparrow – Office of the National Coordinator – Executive Director
I just have 10:00 to 11:00.

W
That's what I have also.

Judy Sparrow – Office of the National Coordinator – Executive Director
Do you want to make it a little longer, 10:00 to 12:00?

W
It could go to 12:00 if others want to, but not later than that because the data council is at 1:00.

Judy Sparrow – Office of the National Coordinator – Executive Director
I think that's probably why we did that. But I'll send it out 10:00 to 12:00, and then….

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Well, actually, I prefer to keep it at, I think we're at one hour right now.

Judy Sparrow – Office of the National Coordinator – Executive Director
Okay.

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Keep it at that if we can.

Judy Sparrow – Office of the National Coordinator – Executive Director
Okay. Perfect. Any public comments, operator?

Operator
We do not have any public comments at this time.

Judy Sparrow – Office of the National Coordinator – Executive Director
Okay. Thank you. Jamie?

Jamie Ferguson – Kaiser Permanente – Executive Director HIT Strategy & Policy
Folks, thank you all very much. I apologize for the schedule conflict, but I hope you don't mind getting the extra hour back. I have been taking notes. I've made a few changes to the recommendations as a result of this discussion. I'll send out a revised draft, and I just want to thank everybody for your time.

Judy Sparrow – Office of the National Coordinator – Executive Director
Thank you, Jamie.

W
Thanks.

W
Thank you, Jamie.

M
Bye.

W
Bye.